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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/691,838 | 10/23/2003 | Aloke Guha | COS - 001 | 6679 |
| 7590 | 12/13/2005 | | EXAMINER | |
| William L, Botjer PO Box 478 Center Moriches, NY 11934 | | | | SCHLIE, PAUL W |
| | | ART UNIT | PAPER NUMBER | 2186 |

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/691,838 | GUHA ET AL. |
| | Examiner | Art Unit |
| | Paul W. Schlie | 2186 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 October 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-28 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-28 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 23 October 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date 1. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

1. Claims 1-28 have been examined.

Specification

2. The use of the trademark FasFile™ has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

3. The disclosure is objected to because of the following informalities: Within the third paragraph on page 3 of the disclosure, it is stated that an intent of the invention to provide a method by which a "logical unit number (LUN)" may be divided up into a plurality of segments which may be distributed across multiple drives; then further defines that each LUN identifies devices "each of which forms a logical unit, on a bus", then further that "each LUN identifies a specific logical unit, which may be an end-user, a file, or an application program": and then finally associates a "volume identifier" with a "logical unit number (LUN)" within lines 4-5 of page 13 of the disclosure; so it's not clear what a "logical unit", "logical unit number (LUN)" or "volume identifier" is meant refer to within the context of the disclosure, as it's not logically consistent for an "logical unit number (LUN)" to be utilized to simultaneously designate an "device" "which forms a logical unit, on a bus", and/or a "logical volume", and/or a "file"

potentially stored within that "logical volume" which may be accessed through a specific "device ... on a bus". It will be assumed that a "logical unit number (LUN) is meant to designate a logical volume which represents the logical storage within which logical objects/files may be allocated and correspondingly accessed as would be visible to an operating system and/or storage application for the purposes of this examination.

Appropriate correction is required, and the applicant is reminded that no new subject matter may be introduced into the application in the process.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.

5. Claim 2 is rejected as it recites the limitation "the storage application", within element (a) of the claim; for which there is insufficient antecedent basis for this limitation. For the purposes of examination, the claim will be treated as if amended to further comprise an earlier "storage application" limitation.

Corrective action is required.

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled

in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. As specifically claims 1, 10, 25, and correspondingly dependant claims cite or implicitly rely on the determination of an optimized data organization configuration, and potentially dynamically adapting a previously existing organization configuration to this newly determined more optimal (by some definitive measure) configuration in some presumably minimally obtrusive manner, where although the disclosure cites obvious parameters which may be considered in such a determination, no sufficiently detailed method is considered taught to enable one of ordinary skill in the art to implement without likely undue experimentation; therefore such claims and their dependants are not considered enabled. The applicant is reminded that no new subject mater may be introduced into the application.

Claim Rejections - 35 USC § 102 / 103

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-5, 7-8, 10-19, 21-24 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Idleman et al. (5,274,645).

As per claims 1 and 10, Idleman et al. teaches an adaptive data storage system comprising: a data storage system controller may dynamically configure the organization of data to optimize performance of the storage system for applications having different storage system needs; a plurality of data storage units; and an interconnect between the data storage units and the storage system controller (column 3 lines 31-35, column 4 lines 19-43, column 28 lines 39-46, and figures 1-5).

As per claims 2-5, 7-8, 11-19 and 21-24, being dependant on claim 1, 10, or corresponding dependants inclusively, Idleman et al. further teaches a storage system further comprising: a plurality of host adaptors to connect to a storage application, at least one processor and corresponding memory for commands and/or data correspondingly interconnected to a controller and the plurality of data storage units; within which transparent data organizational logical to physical mapping within the logical volumes as visible to host applications may be determined and allocated so as to more optimally satisfy their data storage performance requirements, inclusive of the maintenance of critical physical storage resource characteristics and determined mapping data as required to control allocation, access, and fault recovery; including an integrated XOR/ECC acceleration architecture (see figures 6-25, and further column 4 lines 19-43).

Any and all potentially remaining claimed limitations are not considered to be sufficient to patentably distinguish over prior art.

11. Claims 6, 9, 20 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Idleman et al. (5,274,645) in view of Dumphy, Jr. et al. (4,914,656).

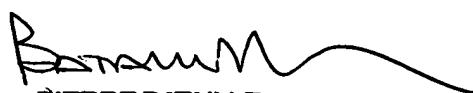
12. As per claims 6, 9, 20 and 25-28, being dependant or partially equivalent to claim 1 or correspondingly dependant claims inclusively as taught by Idleman et al. above, but does not explicitly teach that a drive's power may be independently controlled, and disabled when not otherwise required to save power. However, Dumphy, Jr. et al. teaches that drive's power may be independently disabled when in an idle state and not otherwise required for immediate access to save power; such as when a drive is not physically required to be accessed in parallel with other drives, as would be the case for any and all possible multi-drive RAID data organization schemes at the potential expense of aggregate performance, as may be a desired and considered obvious if so (see column 9 lines 47-54 and figure 1). It would be obvious to one of ordinary skill in the art at the time of the disclosed invention to combine that taught by Idleman et al. with that taught by Dumphy, Jr. et al. relevant to the claims, for the benefit of enabling a storage system to power down drives not physically required for concurrent access, and/or limit the number of drives which may be concurrently powered if the system's power supply is inadequate to power all drives concurrently. Any and all potentially remaining claimed limitations are not considered to be sufficient to patentably distinguish over prior art.

Art Unit: 2186

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul W. Schlie whose telephone number is 571-272-6765. The examiner can normally be reached on Mon-Thu 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on 517-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


PIERRE BATAILLE
PRIMARY EXAMINER
12/09/05